



Date: Thursday, 13/09/2007 2:58:46 PM
 User: Linda Lacelle

Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd.	Drawing Name : D412-664-203
Job Number : 34668	
Estimate Number : 10804	
P.O. Number : N/A	Part Number : D412664203
This Issue : 13/09/2007 S.O. No. : N/A	Drawing Number : RTN 632
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A	Drawing Revision : N/A
Previous Run : 00015	Material : N/A
Written By : 	Due Date : 20/09/2007
Checked & Approved By : 	Qty: 1 Um: Each
Comment :	

Additional Product

Job Number:




Seq. #: Machine Or Operation: Description :

1.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT RTN 632

13/09/07 14 

2.0 D412664203 Crosstube Aft High



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
 Crosstube Aft High
 ORIGINAL B/N 30186 CHG005

3.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

-STRIP TUBE FROM OUTSIDE OF SUPPORTS
 DOWN TO CUFFS
 DO NOT STRIP IN BETWEEN SUPPORTS

**MASK OFF 4" AWAY FROM SUPPORTS
 TO ENSURE STRIPPER DOES NOT REACH
 SUPPORTS ***

13-07-09-18

4.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1
 POLISH TUBE PER NEW METHOD
 TO ACHIEVE LONGITUDINAL BUFFING LINES

TEL: 416-662-8316 FAX: 416-662-4118	
CHG005	SH01-9
SR01298NY	
D412-664-203	Crosstube Aft High
B30186	Bell 412
MADE IN CANADA	

JD 7-9-18

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Seq. #:

Machine Or Operation:

Description :

5.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Er AL02/18

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

ALODINE SIDE OF TUBE PER QSI 005

85 07-09-19

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

AL05:24①

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

-MASK OFF THE 2 OUTER SUPPORTS &
CENTER SUPPORT
-PRIME AND PAINT WHITE
PER QSI 005 4.2.1.5

It 07 09 24

①

9.0

QC14

INSPECT SPRAY PAINT



Comment: INSPECT SPRAY PAINT

ml 07 09 25

①

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

PICK NEW ASS'Y KIT:

4 X MS21920-28 B

105385 ml 07 09 25

Rubber cushion: B33835

2 X MS21920-30 B

100154

2x D3189-1 B30201

Assemble as per Dwg D412-664-203

* Note: position changing shields 45° aft

1-Install supports with magnobond as per QSI 015. Adhere for 12 Hrs

A/R 6398 Magnobond

Batch:

Expiry Date:

N/A

2-Install clamps as per Dwg D212-664-141. Torque clamps to 80-100 in lb.

ml 07/09/25

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Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

MS2192028

Clamp(per MIL-DTL-8783C)



See previous page

Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Clamp(per MIL-DTL-8783C)

12.0

MS2192030

clamp(per MIL-DTL-8783C)



See previous page

Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)
clamp(per MIL-DTL-8783C)

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

1705-26 @

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

15.0

AN640A

Bolt



5 Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Bolt
Batch: *M104374-*

EP

16.0

AN641A

Bolt



5 Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)
Bolt
Batch: *M100743-*

EP

17.0

AN960JD616

Washer



5 Comment: Qty.: 18.0000 Each(s)/Unit Total: 18.0000 Each(s)
Washer
Batch: *M104745-*

EP

1705-26 @

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Part Number: D412664203

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

MS21042L6

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)

Nut

Batch: M104021

19.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

20.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D412-664-203

**USING NEW B/N

NEW PAPERWORK AND LABELS REQ'D**

*****Ensure tube is not packaged if curing time is less than 12 hrs, see step 27 for application time & date

Time & date of packaging: 1.05 7/9/26

Location: C

PPP Rev: C

21.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



u 57.09.28

DART**RELEASE**

07.04.24

DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED QP	APPROVED [Signature]	DRAWING NO. D412-664-243	REV. D SHEET 1 OF 3
DATE 07.03.09		TITLE CROSSTUBE ASSEMBLY (412 HI AFT)	SCALE NTS
A	01.10.17	NEW ISSUE	
B	05.02.04	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	
C	06.10.27	REMOVE D2856-600-1087, ADD D2732-058 & MAGNOBOND 6398 MS21920-32 WAS MS21920-30	
D	07.03.09	REMOVE D2732-058, CHANGE TO D3595-063-570	

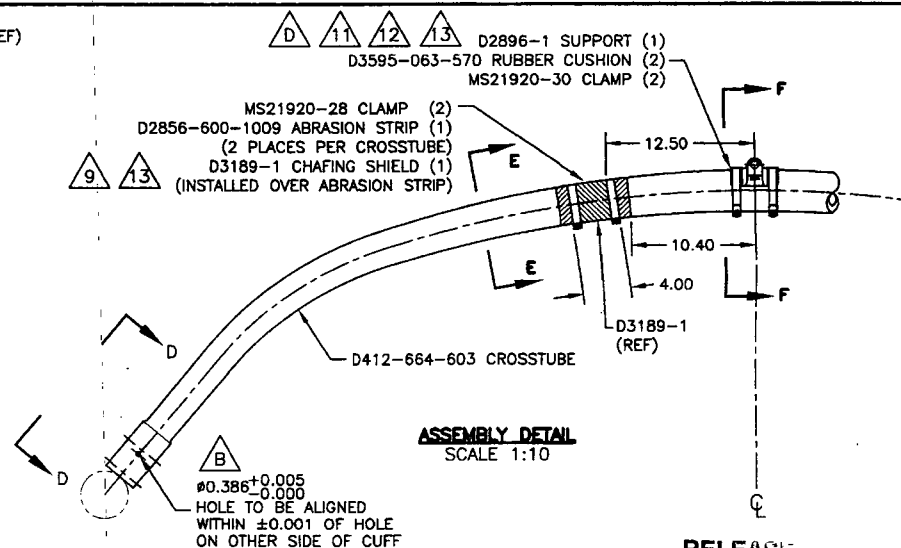
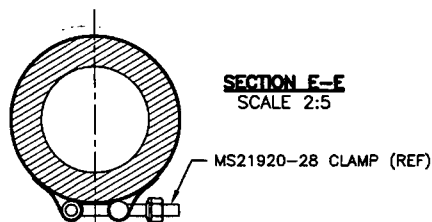
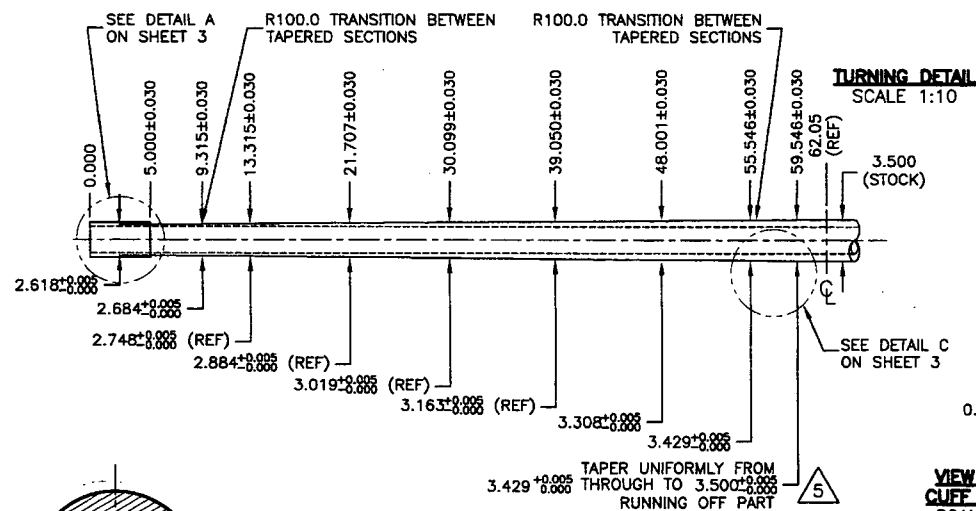
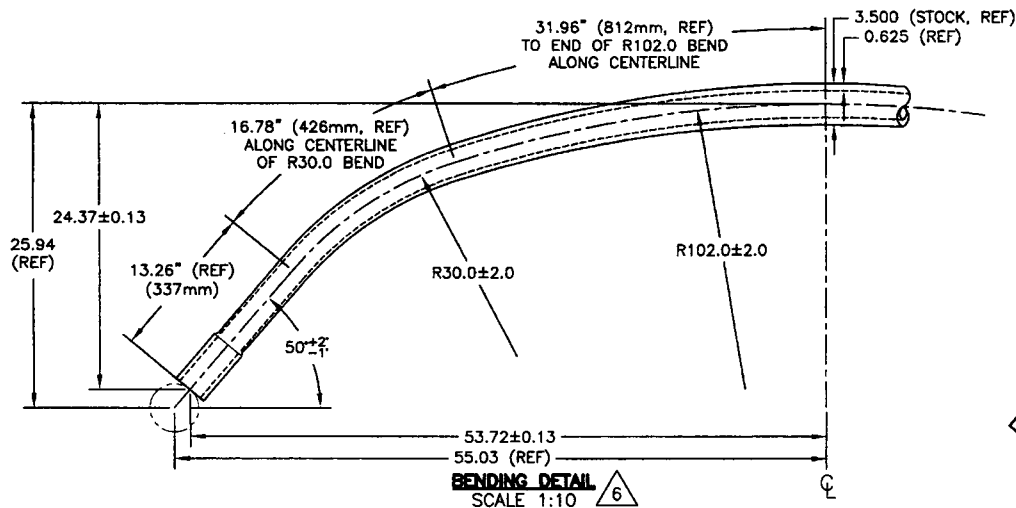
Qty	Part Number	Description
X	D412-664-243	CROSSTUBE ASSEMBLY (412 HIGH AFT)
1	D6009-129	CROSSTUBE
2	D3595-063-570	RUBBER CUSHION
1	D2896-1	SUPPORT
2	D2856-600-1009	ABRASION STRIP
4	MS21920-28	CLAMP
2	MS21920-30	CLAMP (OR MS21920-32)
2	D3189-1	CHAFING SHIELD
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6009-129
FINISHED LENGTH = 124.09±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-30 CLAMPS (OR -32) WITH D3595-063-570 RUBBER CUSHIONS TO SECURE D2896-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

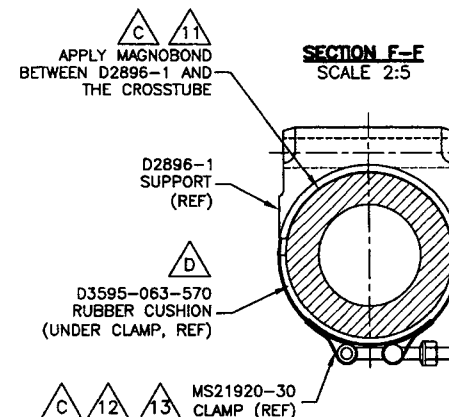
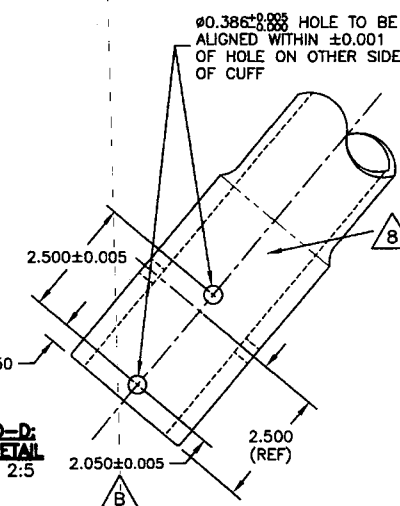
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RELEASE

07 04 24



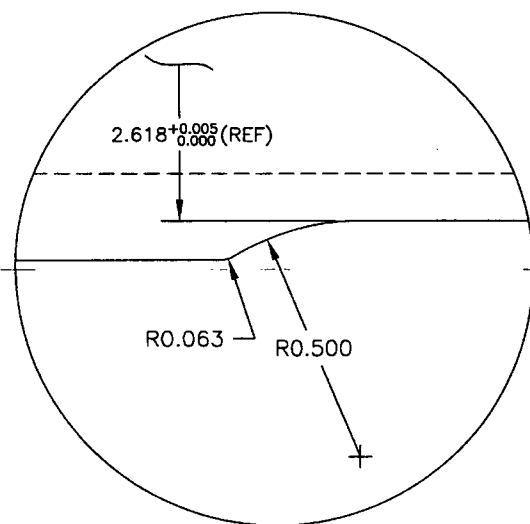
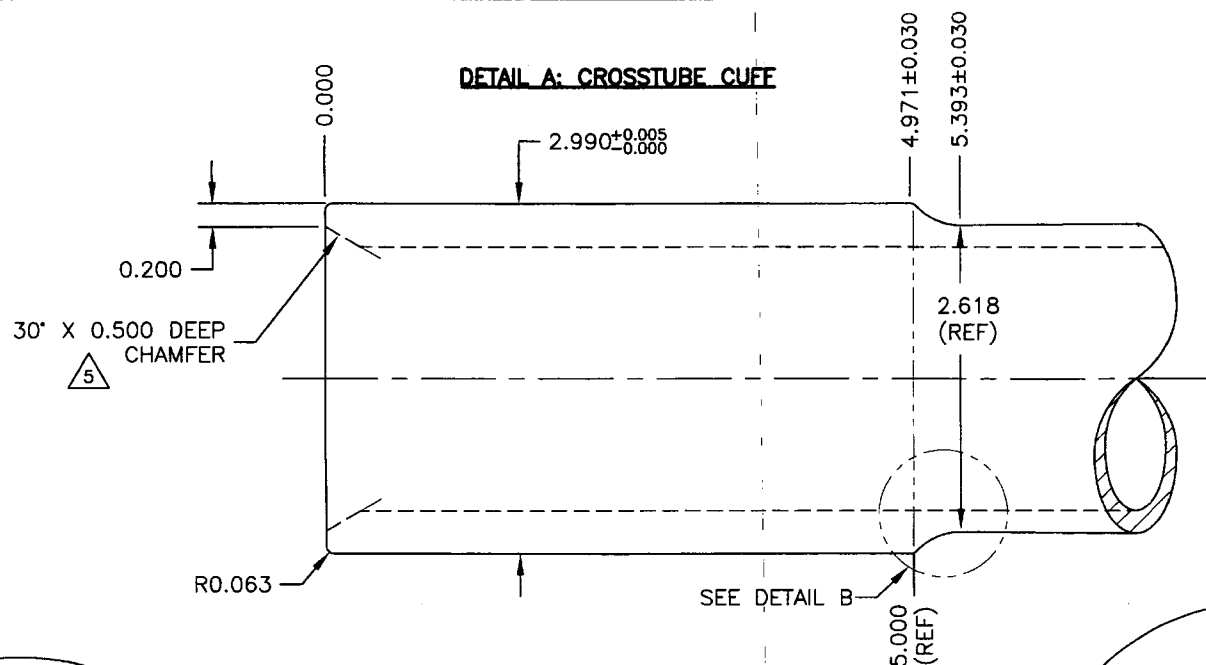
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DESIGN	PH	DRAWN BY	PH	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED	97	APPROVED	97	DRAWING NO.	REV. D
				D412-664-243	SHEET 2 OF 3
DATE	07.03.09	TITLE		CROSSTUBE ASSEMBLY (412 HI AFT)	SCALE 1:10

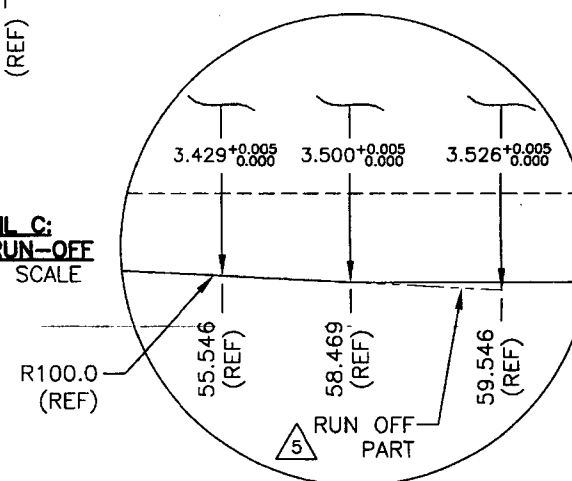
RELEASED
 07-06-244P
 PER ECU 897

DETAIL A: CROSSTUBE CUFF



**DETAIL B: CUFF
 TRANSITION**
 SCALE 4:1

**DETAIL C:
 TAPER RUN-OFF**
 NOT TO SCALE



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CHECKED	J	APPROVED	[Signature]	DRAWING NO. D412-664-243	REV. D SHEET 3 OF 3
DATE	07.03.09	TITLE	CROSSTUBE ASSEMBLY (412 HI AFT)	SCALE	1:1